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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/697,525	10/30/2003	Ingo Konetzki	I/1418US	7671

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EXAMINER	
HENLEY III, RAYMOND J	

ART UNIT	PAPER NUMBER
1614	

DATE MAILED: 06/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/697,525	KONETZKI ET AL.	
	Examiner	Art Unit	
	Raymond J. Henley III	1614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-17 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-17 is/are rejected.

7)☒ Claim(s) 2 and 15-17 is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 3/11/2004.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

CLAIMS 1-17 ARE PRESENTED FOR EXAMINATION

Applicants' Information Disclosure Statement filed March 11, 2004 has been received and entered into the application. As reflected by the attached, completed copy of form PTO/SB/08a, the Examiner has considered the cited references. References cited on the attached form PTO-892 and not relied on have been included to show the general state of the art concerning beta-hydroxy phenylethylamine compounds.

Claim Objections

Claim 2 is objected to because the term "compounds" at line 1 is incorrect. The term should be amended to read in the singular tense in order to overcome this ground of objection.

Claims 15-17 are objected to under 37 CFR 1.75(c) as being in improper multiple dependent form because "according to one of claims 1 to 14" is not an alternative expression. See MPEP § 608.01(n). In order to expedite prosecution of the present application, these claims will not be withdrawn from further consideration. The claims will be interpreted as though proper alternative language is present. The claims should be amended to read ---according to any one of claims 1 to 14--- in order to overcome this ground of objection.

Claim Rejection - 35 USC § 103

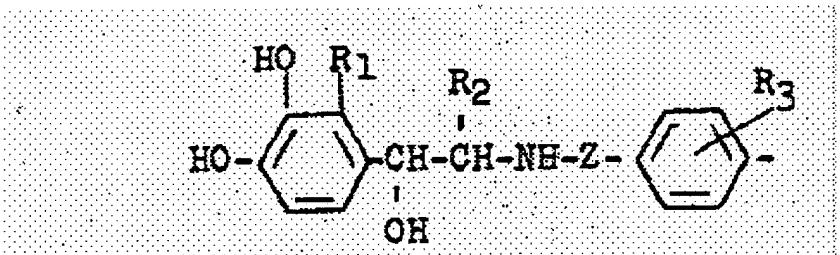
The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mentrup et al. (U.S. Patent No. 3,969,410, cited by Applicants) in view of Remington's Pharmaceutical Sciences ("Remington", cited by the Examiner), Goodman and Gilman's ("Goodman", cited by the Examiner) and Walland et al. (U.S. 2002/0022625, cited by Applicants).

Mentrup et al. teach compounds of the formula :



wherein
R_1 is alkyl of 1 to 5 carbon atoms,
R_2 is hydrogen or lower alkyl,
R_3 is hydrogen or hydroxyl, and
Z is alkylene of 2 to 6 carbon atoms,
and non-toxic, pharmacologically acceptable acid
dition salts thereof; the compounds as well as the
are useful as sympathomimetics.

(see the abstract and col. 1, lines 14-41).

Applicants' compounds correspond to the compounds of Mentrup et al. where, using the variables of the patentees, R_1 is an alkyl of 1 carbon atom; R_2 is hydrogen; Z is an alkylene of 4-6. Mentrup et al. further teaches that the compounds "exhibit bronchospasmolytic and antipuritic activities and dilate the peripheral blood vessels in warm-blooded animals" (col. 10, lines 12-16) show pharmaceutical compositions and an effective amounts ranging from 0.05 to 10.0 mg/kg body weight (col. 10, lines 22-32).

The differences between the above and the claimed subject matter lies in that the patentees fail to highlight:

(i) that Z may be a branched chain group corresponding to Applicants' variable "n" having a value of 0, 1 or 2;

(ii) where R_3 is a methyl group; and

(iii) that the compounds may be used in a method of treating a disease "that benefits from treatment with anticholinergics" (present claim 16) or for "restoring sinus rhythm in the heart in atrioventricular block or treatment of a disease or condition selected from asthma, COPD, inflammatory and obstructive respiratory complaints, premature labor in midwifery (tocolysis), bradycardic heart rhythm disorders, cardiovascular shock, or itching and irritations of the skin in a patient" (present claim 17).

However, the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains because:

(i) Mentrup et al. teach that Z may be generally an alkylene of 2 to 6 carbon atoms and thus would have included those branched chain configurations as encompassed by the present claims. One of ordinary skill in the art would have been motivated to select any such configuration from those generally taught because the patentees indicate that all instances where Z is an alkylene of from 2 to 6 carbon atoms may be used.

(ii) As shown in Remington's, a methyl group was known to be an isosteric equivalent of the hydroxy group taught by Mentrup et al. for R_3 (see Table II at page 431 "-F to –OH to $–NH_2$ to $–CH_3$ and the related discussion on page 431 under the heading "Molecular Modification", subheading "Isosterism") and thus would have been expected to be just as useful as the hydroxy substituent taught by the patentees. One of ordinary skill in the art would have been motivated to make such a substitution because such a person would have been aware of the isosteric nature of hydroxy and methyl groups. Also, the patentees provide the concept of using structurally related compounds in their teaching that derivatives such as the salts, i.e., "and non-toxic, pharmacologically acceptable acid addition salts thereof" (e.g., abstract at last sentence), as well as other types of isomers, i.e., "their stereoisomeric components, their diastereomeric antipodes...racemic mixtures" (col. 1, lines 38-41) could also be used. Further, "'An obviousness rejection based on similarity in chemical structure and function entails the motivation of one skilled in the art to make a claimed compound, in the expectation that compounds similar in structure will have similar properties.' *In re Payne*, 606 F.2d 303, 313, 203 USPQ 245, 254 (CCPA 1979). See *In re Papesch*, 315 F.2d 381, 137 USPQ 43 (CCPA 1963) and *In re Dillon*, 919 F.2d 688, 16 USPQ2d 1897 (Fed. Cir. 1991)" (see MPEP § 2144.09).

(iii) One of ordinary skill in the art would have recognized that the sympathomimetic activity referred to by Mentrup et al. (e.g., abstract), is betamimetic activity and this would have motivated such a person to use the compounds of Mentrup et al. in the manner claimed, i.e., present claim 17, "restoring sinus...skin in a patient" because it was known in the art to use betamimetic compounds for these purposes. In particular, Mentrup et al. teach that the compounds "exhibit bronchospasmolytic and antipuritic activities and dilate the peripheral blood vessels in warm-blooded animals" (col. 10, lines 12-16) while Goodman teaches that isoproterenol "is the most active of the sympathomimetic amines that act almost exclusively on β receptors" (page 153, paragraph bridging cols. 1-2) and "lowers peripheral vascular resistance" (page 153, col. 2, under the heading "Cardiovascular System") and "relaxes almost all varieties of smooth muscle when the tone is high, but this action is most pronounced on bronchial and gastrointestinal smooth muscle" and "prevents or relieves bronchoconstriction due to drugs and bronchial asthma in man" (page 153, col. 2, under the heading "Smooth Muscle"). That betamimetic compounds were known for the purpose of present claim 17 is shown by Walland et al. (U.S. 2002/0022625) at page 5, col. 1, paragraph [0068], "...the compounds of formula 1 according to the invention may preferably be used on the basis of their pharmaceutical activity as betamimetics...for example, the treatment of bronchial asthma ... as well as the treatment of itching and skin inflammation.". Also, respecting present claim 16, the teaching of asthma above meets the claim requirement for "a disease that benefits from treatment with anticholinergics" because Goodman teaches that anticholinergics, a.k.a. antimuscarinics, were effective for treating asthma (see page 120, col. 1, first paragraph and the section bridging pages 134-135).

Insofar as the phenyl group which is adjacent to the Z group in Mentrup et al. is taught only to be mono-substituted, the above rejection does not pertain to the claimed subject matter where such phenyl is multiply substituted.

None of the claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond J. Henley III whose telephone number is 571-272-0575. The examiner can normally be reached on M-F, 8:30 am to 4:00 pm Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Low can be reached on 571-272-0951. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Raymond J Henley III
Primary Examiner
Art Unit 1614

June 18, 2005